

Southern Maine Community College)	Departmental
Cumberland County)	Findings of Fact and Order
South Portland, Maine)	Air Emission License
A-669-71-E-R/A)	

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Southern Maine Community College (SMCC) (formerly Southern Maine Technical College) of South Portland, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their South Portland, Maine educational facility.

SMCC has requested a modification to their License to reflect the addition of two new boilers in a new residence hall and the inclusion of two parts degreasers.

B. Emission Equipment

Southern Maine Technical College is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr or scf/hr)</u>	<u>Fuel Type</u>	<u>Date of Construction</u>	<u>Stack #</u>
Boiler #1	4.38	4294 scf/hr	Natural gas	1982	1
Boiler #2	4.03	3951 scf/hr	Natural gas	1964	2
Boiler #3	2.24	2196 scf/hr	Natural gas	1981	3
Boiler #4	2.73	2676 scf/hr	Natural gas	1969	4
Boiler #5	2.73	2676 scf/hr	Natural gas	1969	5
Boiler #6	1.01	990 scf/hr	Natural gas	1987	6
Boiler #7	1.28	1255 scf/hr	Natural gas	1990	7

Boiler #8	1.59	11.4 gal/hr	#2 Fuel Oil	1985	8
Boiler #9	1.62	1588 scf/hr	Natural gas	1980	9
Boiler #10	1.62	1588 scf/hr	Natural gas	1973	10
Boiler #11	1.52	1490 scf/hr	Natural gas	1974	11
Boiler #12*	2.54	2490 scf/hr	Natural gas	2007	12
Boiler #13*	2.54	2490 scf/hr	Natural gas	2007	13

* Denotes new equipment

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as defined in the Department’s regulations. This application is determined to be a renewal and minor modification of a minor source, and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boiler Units

Southern Maine Technical College operates a total of thirteen boilers for heating and hot water needs in their several campus buildings. Boilers #1, #2, #3, #4, #5, #6, #7, #9, #10, #11, #12 and #13 are all natural gas fired boilers with maximum design heat input capacities ranging from 1.01 MMBtu/hr to 4.38 MMBtu/hr. Boiler #8 has a maximum design heat input capacity of 1.59 MMBtu/hr firing #2 fuel oil. None of the boilers are subject to New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BPT and BACT analysis for the Boilers is as follows:

1. *Fuel Burning Equipment Particulate Emission Standard* 06-096 CMR 103 regulates PM emission limits for Boilers #1 and #2, however, the PM limit of 0.05 lb/MMBtu is more stringent and shall be considered BPT. A PM emission limit of 0.05 lb/MMBtu shall be considered BPT for Boilers #3-#7 and Boilers #9-#11. A PM emission limit of 0.08 lb/MMBtu shall be considered BPT for Boiler #8. A PM emission limit of 0.05 lb/MMBtu shall be considered BACT for Boilers #12 and #13. The PM₁₀ limits are derived from the PM limits.
2. *Low Sulfur Fuel*, 06-096 CMR 106 (last amended June 9, 1999) regulates fuel sulfur content. However, the use of #2 fuel oil that meets the criteria in ASTM D396 for boiler #8 and the use of natural gas in the other boilers is more stringent and shall be considered BACT for boilers #12 and #13 and BPT for the other boilers.
3. SO_x, NO_x, CO and VOC emission limits for natural gas fired boilers are based upon AP-42 data dated 7/98.
4. NO_x, CO and VOC emission limits for #2 fuel oil are based upon AP-42 data dated 9/98.
5. Visible emissions from the boilers shall each not exceed 10% opacity on a six (6) minute block average, except for no more than one (1), six (6) minute block average in a continuous 3-hour period.

C. Degreaser Unit

SMCC is installing two degreaser units that were manufactured in 2007 and each has a design capacity of 15 gallons. SMCC plans on using *Ozzy Juice* low VOC solvent in the degreaser units as a cleaning medium, but may use other low VOC solvents as well. Records shall be kept of the solvent added and removed. The Degreaser Units are subject to the requirements of *Solvent Cleaners*, 06-096 CMR 130 (last amended June 28, 2004).

D. Annual Emission Restrictions

1. Total annual facility natural gas use shall not exceed 50,000,000 standard cubic feet (scf) in a calendar year.
2. Total annual facility #2 fuel oil use shall not exceed 50,000 gallons in a calendar year.
3. SMCC shall be restricted to the following annual emissions:

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
#2 Fuel Oil	0.28	0.28	1.76	0.50	0.13	0.01
Natural Gas	1.28	1.28	0.02	2.50	2.10	0.14
Total TPY	1.56	1.56	1.78	3.00	2.23	0.15

III.AMBIENT AIR QUALITY ANALYSIS

According to the 06-096 CMR 115, the level of air quality analyses required for a minor source renewal shall be determined on a case-by-case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. Based on the above total facility emissions, SMCC is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-669-71-E-R/A subject to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that

there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

- C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

- (16) Natural Gas Boiler Units

- A. SMCC shall not exceed a total facility natural gas usage of 50,000,000 scf of natural gas on a calendar year basis. Records from the supplier documenting quantity delivered shall be maintained for compliance purposes. [06-096 CMR 115, BPT, BACT]

- B. Emissions from the natural gas fired boilers shall not exceed the following:
[06-096 CMR 115, 06-096 CMR 103, BPT, BACT]

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.05	-	-	-	-	-
	lb/hr	0.22	0.22	Neg.	0.43	0.36	0.02
Boiler #2	lb/MMBtu	0.05	-	-	-	-	-
	lb/hr	0.20	0.20	Neg.	0.40	0.33	0.02
Boiler #3	lb/hr	0.11	0.11	Neg.	0.22	0.18	0.01
Boiler #4	lb/hr	0.14	0.14	Neg.	0.27	0.22	0.01
Boiler #5	lb/hr	0.14	0.14	Neg.	0.27	0.22	0.01
Boiler #6	lb/hr	0.05	0.05	Neg.	0.10	0.08	0.01
Boiler #7	lb/hr	0.06	0.06	Neg.	0.13	0.11	0.01
Boiler #9	lb/hr	0.08	0.08	Neg.	0.16	0.13	0.01
Boiler #10	lb/hr	0.08	0.08	Neg.	0.16	0.13	0.01
Boiler #11	lb/hr	0.08	0.08	Neg.	0.15	0.13	0.01
Boiler #12	lb/hr	0.13	0.13	Neg.	0.25	0.21	0.01
Boiler #13	lb/hr	0.13	0.13	Neg.	0.25	0.21	0.01

- C. Visible emissions from the natural gas boilers shall each not exceed 10% opacity on a 6-minute block average except for no more than one (1) six (6) minute block average in a 3-hour period. [06-096 CMR 101]

(17) Boiler #8

- A. SMCC shall not exceed a total annual facility usage of 50,000 gallons of #2 fuel oil, that meets the criteria in ASTM D396, on a calendar year basis. Records from the supplier documenting quantity and fuel type shall be maintained for compliance purposes. [06-096 CMR 115, BPT]

- B. Emissions from boiler #8 shall not exceed the following: [06-096 CMR 115, BPT]

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #8	lb/hr	0.13	0.13	0.80	0.23	0.06	0.01

- C. Visible emissions from Boiler #8 shall not exceed 10% opacity on a 6-minute block average except for no more than one (1) six (6) minute block average in a 3-hour period. [06-096 CMR 101].

(18) Degreaser Units

The degreaser units at SMCC are subject to *Solvent Cleaners*, 06-096 CMR 130 (last amended June 28, 2004).

A. SMCC shall keep records of the amount of solvent added to each degreaser unit. [06-096 CMR 115, BPT]

B. The following are exempt from the requirements of 06-096 CMR 130 [06-096 CMR 130]:

1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
2. Wipe cleaning; and,
3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.

C. The following standards apply to remote reservoir cold cleaning machines that are applicable sources under Chapter 130.

1. SMCC shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 CMR 130]:
 - (i) Waste solvent shall be collected and stored in closed containers.
 - (ii) Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
 - (iii) Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
 - (iv) The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
 - (v) Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
 - (vi) When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
 - (vii) Spills during solvent transfer shall be cleaned immediately. Sorbent material shall be immediately stored in covered containers.
 - (viii) Work area fans shall not blow across the opening of the degreaser unit.
 - (ix) The solvent level shall not exceed the fill line.
2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [06-096 CMR 130]

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- (19) SMCC shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).
- (20) **Payment of Annual License Fee**
SMCC shall pay the annual air emission license fee within 30 days of **June 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 M.R.S.A. §341-D, §§ 3

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 5/14/2007

Date of application acceptance: 6/5/2007

Date filed with the Board of Environmental Protection: _____

This Order prepared by Jonathan Voisine, Bureau of Air Quality.